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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/088,553 | 03/19/2002 | Motoya Iwasaki | A253-1 | 6682 |
| 21254 | 7590 | 03/01/2005 | EXAMINER | |
| MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817 | | | DEPPE, BETSY LEE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2637 | |

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|----------------------------------------|--|
| Office Action Summary | Application No. 10/088,553 | Applicant(s) IWASAKI, MOTOYA | |
| | Examiner Betsy L. Deppe | Art Unit 2637 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed December 14, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-17,19-33,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,21,27,29 and 36 is/are allowed.
- 6) ☒ Claim(s) 4-17,19,20,22-24,26,28,30-33 and 35 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on October 28, 2004. Upon further review, these drawings are not approved because they are inconsistent with the detailed description. Page 26, lines 9-14 describes the maximum detecting circuit in Figure 5 whereas the drawings show it in Figure 2.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s): a maximum detecting means as recited in claim 3, 10 and 11. No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as

per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. The claims are objected to because of the following informalities:
- a. in claims 4-6, 19, 20, 22-24, 28 and 30, the Examiner suggests changing " $k \times M < m < (k + 1) \times M$ " to " $(k \times M) < m < ((k + 1) \times M)$ " for clarification;
 - b. in claim 19, lines 12-13, "K correlation values transmitted from said first sub-correlator to" should be "stored K correlation values to" for clarification;
 - c. in claim 20, lines 15-16, "K correlation values transmitted from said first sub-correlator to" should be "stored K correlation values to" for clarification;
 - d. in claim 22, line 12, "plurality" should be "number";
 - e. in claim 22, line 13, "a number of which is determined in accordance with types of said fixed word" should be "and said number is determined in accordance a number of different fixed words"; and
 - f. in claim 25, line 8, the comma should be deleted.
- Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The detailed description as originally filed does not describe a correlator with a comparator in combination with a plurality of second sub-correlators. Although the specification describes using a comparator, it does not describe using a comparator and a second sub-correlator as recited in claim 26.

According to page 28, lines 10-12, a comparator "may be used in place of the second sub-correlator" (*emphasis added*). Therefore, the specification does not disclose using both a comparator and a second sub-correlator.

7. Claims 4-17, 19, 20, 22-24, 28, 30-33 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. With regard to claims 4-17, 19, 20, 22-24, 28 and 30, it is unclear how "m" in the respective independent claims relates to the other limitations in the respective claims.

9. With regard to claims 4, 5, 8, 10, 12, 14, 16, 19, 22 and 23, it is unclear what the first sub-correlator is receiving as an input signal and how it functions, as recited on lines 2-7 of claims 4, 5 and 7 and on lines 3-8 of claims 22 and 23. For example, it appears that it receives a fixed pattern but it is unclear how the "input signal" relates to the fixed pattern. Furthermore, it is unclear what is used to determine a correlation value. It is also unclear how "said fixed pattern" relates to the correlation value and/or M chip length.

10. With regard to claims 28 and 31-33, lines 4-6 render the claims vague and indefinite. For example, it is unclear how the input signal relates to the fixed pattern? Furthermore, it is also unclear whether the "rate of M chips/symbol" pertains to the fixed pattern, the input signal or the spreading.

11. With regard to claim 30, lines 2-6 render the claim vague and indefinite. For example, it is unclear whether the "detecting a correlation value" on line 5 relates to the means for receiving on line 2 or the obtaining of the signal in the input signal on line 3.

12. In claim 30, it is also unclear whether "means for receiving" on line 12 is referring to that on line 2 or that on line 7.

13. With regard to claim 35, claim 35 depends on a canceled claim. It is unclear which claim is being further limited by the limitation recited in claim 35.

Allowable Subject Matter

14. Claims 1, 3, 21, 27, 29 and 36 are allowed.

15. Claim 25 is allowable.

16. The following is a statement of reasons for the indication of allowable subject matter: with regard to claims 1, 3, 21, 25, 27, and 29, prior art of record does not teach or suggests in combination a correlator that includes a plurality of second sub-correlators wherein the number of second sub-correlators is determined in accordance with a number of different fixed words; and with regard to claim 36, prior art of record does not teach or suggests in combination a correlator comprised of a plurality of sub-correlators such as recited in claim 36, lines 4-10.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Wednesday and Thursday (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Betsy L. Deppe
Primary Examiner
Art Unit 2637